Impact of Continuous Improvement on Organization Performance Insight from Pakistan: An Empirical Study

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***Abstract*—Continuous improvement is an organized attempt to find out and apply new ways of doing work for making process improvements by bringing step by step innovations to work and this could be possible by Involving top to bottom employees to bring new ideas to work place. A sample size of 40 companies was selected from four sectors (textile, sports, and surgical instrument) to collect information via in-depth interview with managers. The result shows that by bringing innovation to the work place increasing efficiency and reduce the defect rate will leads the company to improve the quality of product. Companies can get competitive advantage by integrating continuous improvement into their product development, manufacturing, involvement of employees and quality processes.**

***Index Terms*—Competitive advantage, continuous improvement, empirical study, Pakistan.**

I. Introduction

Nowadays there is a hot issue of continuous improvement (CI) in total quality settings in all the organizations that are going to compete in this global village. Top manufacturers and service enterprises alike have come to see quality as a planned source in their competition. As an outcome, they have committed key resources to develop measures such as deficiency rates, response time, delivery commitments, and evaluation of products, services, and operations performance. It enables the organization to capture the maximum share of the market and to reduce the cost that will help to offer Competitive prices. Bringing new ideas is the most important property and a basis of company competitiveness [1]-[3].

The main driver behind the innovation is the optimization of the organization's performance both internally and externally within its respective market targets [1].

A. Going Back to History

The concept of continuous improvement comes after the World War II when Japan was affected badly. Industries were facing huge difficulties, so in order to rebuild it, General MacArthur inquires some of leading experts from the US to visit Japan and give an opinion to them. Dr. W. Edwards Deming was one of them, he was a statistician and experience in survey work and also he was expert in how to reduce waste so he starts helping them by his advice [4]. Deming taught them: "concentrate on the process, not the result, the result itself will be better" and "concentrate the efforts of everyone in the organization on continually improving imperfection at every stage of the process" [4]. By 1970 the Japanese organization was enjoying the benefits of Deming advice. So the idea of continuous improvement is determined by Deming cycle [4] and the KAIZEN idea [5]. Deming cycle includes four steps: "plan, do, check and act" [4].

Continuous improvement is one of the two elements of TQM. West has used the term KAIZEN for it which means "good change". So continues improvement and KAIZEN are sometimes used interchangeably. So Kaizen means improvement on continues basis by involving top managers to workers [5]. Improvement can be done in terms of cost, quality, and delivery, so different techniques can be used to continuously improve processes to increase sales and market shares [5].

B. What is Continuous Improvement?

Different authors define CI as: "CI is defined as a systematic effort to seek out and apply new ways of doing work i.e. actively and repeatedly making process improvements".

Deming [5] has defined continuous improvement as "broad focus of the organization to get better process performance".

Choo and Linderman [6] have defined CI "gradual improvement towards innovation".

Evans [1] and Bessant [7] had defined CI as "the organizational actions with the participation of all the people from top managers to workforce".

As technology is changing day by day, so it is difficult to compete in the race where new records are made and old are broken. Another reason is that customers' needs changed continuously, and so good innovative products today which attracts customer become routine tomorrow. For example, ATM card when were introduce was considered as an innovative service but now it is offered by almost every bank as it becomes a daily need [2].

Continuous improvement is a concept of improving processes, innovations, new ideas, and investment in technology. There are many ways to continuously improve the process performance; few of them are as follow: Kaizen [8], [9], Six Sigma [10], [11], Deming Cycle [5], Total Quality Management [12] and Lean Production [4]".

According to these methods, CI can be achieved by the numbers of following ways.

- By reducing the defect rates
- By reducing the response time
- By increasing the delivery commitments
- By the evaluation of product, service, and operation
- By involving customer into product
- By increasing productivity

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- By improving quality performance
- By improving employee commitment towards work
- By reducing cost

C. Significance of the Study

This study will be very beneficial for the industrial sector especially for those organizations who want to compete in the international market. This study will help them to sustain in the international market for a long time in a better position and making it "better and better" with the passage of time by following different methods and techniques.

II. Background and Associated Work

To compete in the national and international market it is necessary to continuously improve the performance, not only manufacturing performance but also financial performance and improve services as well. Continuous improvement (CI) will help in the assurance of quality, satisfaction of a customer, reducing cost, and increasing efficiency and in short it will be very fruitful to compete in the global competition. So CI shows a positive impact on the performance of the organization and without it, it is difficult to survive in the global competition.

Continuous improvement requires a company-wide focus to make better the operation performances [1], [4]. An ongoing progress through gradual improvement is also termed as CI [7], [13], [14]. Firm activities in which everyone from the top management to the workers' involved is necessary [1], [5], [15], and [16]. Create a learning culture to enhance knowledge [7], [8]. So CI is a stepwise improvement of processes in every department of the organization, so processes can be improved by different ways, like bring newness in technology, eliminate your deficiencies and improve your strength because there is always a room for improvement and good enough is never enough. Human resource is the key to remove deficiencies so from the top management to the workers' everyone has to play his role positively, there is need to trust on them so that they can feel free to share their opinion, it will ultimately build their confidence level and will increase their motivation [14].

A firm quality performance can be improved by minimizing the production defects [15]. The quality of product means that it should be free of defects and at least it should fulfill the needs of the customer. So the observes result should at least match the desired result [16].

Variety of defects occurs due to malfunction, process variation and improper process variation [8]. So, there should be proper recording and analysis of defects to overcome different problems and control future occurrence. Reject and defect are two different terms. When the rejects are more than the expectation it means that there is some problem in the system, so in ordered to avoid defects there is need to have a proper monitoring system which should monitor the performance continuously. In this, way variation can be reduced [6].

Continuous improvement is a continual effort to enhance the quality of products, to provide better services and to improve processes. This improvement can be step by step improvement or breakthrough at once [2]. From the literature the following variable has been identified which can have an effect on organization performance [15].

Certification, Customer involvement, productivity, efficiency, quality, employee commitment, innovation, defect rate, cost, sales, training, evaluation, cycle time, motivation, market share, and cost of goods sold (CGS). Some of these are dependent variable and others are independent. These show a positive impact on organization performance. According to previous literature, organization involve voice of the customer can make many improvements in the product or services because the product or services are made for the customer so the most important thing is to satisfy the customer and this can be done by involving them i.e. customer feedback. ISO offers different certification to improve quality, to fulfill the social obligation and to provide neat the environment. Productivity can also be increased by bringing new technology, innovation, and efficiency so the result will be the reduction in cost. Employee's plays a vital role in the production especially lower level employees are directly involved in the production, so they can produce quality and efficiently perform the task [5], [8], [17].

Kaizen strategy is also very helpful in improving quality, reducing cost and reduces cycle time. This is a customer oriented strategy for improvement in which customer's needs and satisfaction is prior. According to Kaizen strategy if the customer is not satisfied you will no longer in the business. Kaizen doesn't necessarily mean a huge investment in the business but to make a stepwise improvement. It also states "first time right" means process should be improved before the result [18], [19].

There is also a need for creating an environment where an employee can participate without hesitation, in continuous improvement deployment, 'lower level employees and middle management should openly participate to make broader changes in the firm strategies, and they should not be limited to process improvement only [1], [20]. So there should be learning culture and appreciation for employee involvement so that they can feel easy to participate. There should also motivation for them, it can be in different ways like implementing there suggestion and reward etc. "Continuous improvement infrastructure should be planned in such a way to motivate employees to share their knowledge within the organization and participate openly without any fear" [4], [13]. This will bring new ideas in the organization place and by sharing those ideas processes can be improved [14].

Organization learning plays a positive role in knowledge of employees while better knowledge can improve their actions. Normal working processes are changed on a continuous basis to improve performance, such as to increase production efficiency and increase customer satisfaction [21].

There are different improvement methodologies such as six sigma and lean manufacturing [9]. Six-Sigma methodology is applied to the process to eliminate process/product defect while ensuring that customer is satisfied, so the main purpose is to eliminate defect from the product. Defects can be eliminated through innovation in technology, by proper monitoring and by training the employees [6], [16].

LEAN manufacturing is a methodology use to transform complex process to smooth continuous production flow,

which delivers customer value more rapidly improve work flow, standardizes processes and eliminate waste. Waste means to remove an item which adds no value or zero value [9]. According to Jacobson *et al* [8], waste can be eliminated by using Kaizen, just-in-time scheduling, Kanban cards, and 5S. So, reduction in defect will reduce cost and save the time which can be spent on reworking, so ultimately it will reduce waste, increase productivity, increase the profit and satisfy the customer which will have a positive impact on the sale [22].

Continuous improvement is a philosophy. It is basically a continuous struggle to get rid of core causes of problems and usually, it could be done with stepwise improvements instead of new investments in the capital [2]. So CI is basically the selection of right resources at the right time at the right place for a specific purpose [3], [17]. So as problem arises in the process we should stop production in order to make it correct because it is better to do "first time the right" instead of rework which can cost more than the correction cost of the problem and can reduce production and negative impact of the product as it delivers to the customer [11], [19]. So proper monitoring should be done, and checked performance on the continuous basis. So mistake should not be repeated and employee should be motivated for continuous success [9], [23].

Learning is very necessary in order to explore new ways and trying different ideas for improving the range of processes. So testing new ideas can be an important part of organizational learning, in short run maybe it is not good but it can help us in long run, so top management should support to achieve the long run benefits as is the requirement of continuous improvement [21], [24]. Management at every level from top to bottom should keenly support and become involved in the process [8]. Top management support is needed in appropriate training, allocation of resources, measurement, and bonus and incentive systems [15]. Proper training should be given to the worker in order to make sure improvement in inventory reduction, cost reduction, increase the production rate and reduce the waste and ineffectiveness [15], [3].

Innovation is very important on a continuous basis because a customer needs changes and innovation cycle becomes shorter. Knowledge is the key factor in innovation so here is a need of sharing knowledge about the process and each and every individual should participate, that is the essence of continuous improvement [3], [16].

III. Research Methodology

A survey is a method for empirical investigation for obtaining a numeric (quantitative) description on the sample. It is the most widely used research methodology for data collection, in order to obtain tacit information on a particular phenomenon or problem of interest [25], [26]. A similar method has been undertaken by other investigators [27]-[33]. We have used Google Drive, a free online Google application for the design and distribution of online survey questionnaire. The detailed process of executing the questionnaire survey is presented in the following sub-sections:

Different survey activities according to Creswell [25] are discussed in the following sections. The main objective of conducting the survey was to validate the hypothesis of the study and to find practices for the factors affecting CI in industries.

A. Planning and Scheduling the Survey

A period of two weeks was spent to plan the survey. Results of literature review (LR) were used to prepare survey questionnaire. After analyzing the results of LR, the authors prepared the questions for the survey.

B. Ensuring that Appropriate Resources are Available

The main resource for this study was contextual data from a manager working in in companies. Contextual data shows that the practitioners are from relevant companies around the country.

C. Designing the Survey

Our questionnaire survey comprises of two steps i.e sampling and design. The process of finding, requesting and selecting the relevant field's experts to participate in the questionnaire survey is termed as sampling [25]-[27]. After sampling, design phase of a questionnaire begins. Here a set of questions is presented for the participant to be answered. Both are elaborated in the subsequent subcategories.

Since our study is an exploratory research Survey. Though a theoretical framework is known for some variables, still major effective variables in our area and their relationship are not known. So this study focuses to identify the factors having an impact on the organization performance.

D. Population of the Study and Sampling

For sampling we have two choices 1) systematic approach and 2) non-systematic approach [25]. In the first approach, samples are drawn from a list of the available entire population, using some statistic while second approach is used for small survey, where the entire population is not available [25], [26], [28]. We have used the non-systematic approach because our survey is on small scale. Further, it was also impossible for us to collect contacts of each and every company and to list and categories the entire employee and selecting professionals 'managers from that. Other researchers Cox *et al.* [26], Khan *et al.* [27] and Ali [28], use a similar approach.

The target population is all the industries in Punjab. But the data is collected from the major industrial cities, as Multan, Faisalabad, Gujranwala, Sialkot, and Wazirabad, as these cities have the main contribution to industries in Pakistan and especially in the mentioned sectors.

E. Implementing On-Line Questionnaire Surveys and Sampling Techniques

We used Cluster sampling which is a part of complex probability sampling. Detailed in-depth interview technique is used. Manager having proper information of continuous improvement relevant to his organization and is the potential respondent because both open and close-ended questions were asked in the questionnaire.

F. Sample Size

The sample size of 40 is selected from four industrial sectors, 10 from each. A detail and proper response were supposed to get from managers of 40 companies?

G. Questionnaire Design

The questionnaire was designed at the Institute of Management Sciences, Bahauddin Zakariiya University, Multan. The questionnaire questions are distributed into four diverse sections. Demographic information is the first section. The second section presents a list of data collection question and is evaluated on a five argument likert scale and section-3 contains the submission information. We have provided a combination of close and open ended questions in our survey. We have queried the respondent to give their answer on a five argument likert scale (1-Extremely Agree (EA), 2-Agree (MA), 3-Not Sure (NS), 4-Extremely Disagree (EDA) and 5-Slightly Disagree (SDA). We have also provided some open-ended questions to the participants. "Give some additional factors other than the listed ones" is an example of open ended question. The survey questionnaire was tested through five members a big company at Multan near the university. Before the distribution of the questionnaire, we wrote a letter of invitation having some briefing of the research study and were mailed to the selected companies.

IV. Results and Analysis

We performed analysis in the form of factor analysis and multiple regressions using descriptive statistics.

A. Descriptive Statistics

This describes the major features of data collection quantitatively. Descriptive statistics also presenting complicated summary about the sample and the procedures. Collectively with simple graphics analysis, they form the base of a quantitative examination of data. Two popular types of descriptive analysis are:

- Factor analysis and
- Multiple regression

B. Factor Analysis

Factor analysis is used to analyze the 5-point likert scale questions to identify different factors having a relationship (independent variables) which can have an impact on the dependent variable. For example (increasing efficiency, making a new innovative product and reducing defect rate) shows the process performance so these three are in one group and we have to check its impact on dependent variable i.e. sales increased or not by improving process performance.

C. Multiple Regression Analysis

It is used to investigate the relationship between a dependent variable and a number of independent variables. Table I. shows the mean and standard deviation of the different question asked.

TABLE I: Mean and Standard Deviation of Different Questions

Factors	Components		
	1	2	3
Involving customer into product			0.769
Increasing productivity			0.817
Increasing efficiency	0.660		
improving quality performance		0.783	
Reducing risk of product recalls		0.552	
Improving employee commitment towards work		0.746	
Making new innovative product	0.544		
Reducing defect rate	0.903		

D. Factors that Directly Contribute towards Continuous Improvement

We have identified three main factors which contributed directly towards continuous improvement.

- Process improvement
- Employee involvement and
- customer orientation

Which is the result of different combinations. The value above 0.5 shows the relationship within the group so three groups are made. Process improvement includes increasing efficiency, making a new innovative product and reducing defect rate which contributes value of 0.660, 0.544 and 0.903 respectively.

Employee involvement includes improving quality performance, reducing the risk of product recalls and improves employee's commitment towards work which contributes the value of 0.783, 0.552 and 0.746 respectively. Customer orientation includes involving customers in the product and increasing productivity which contributes the value of 0.769 and 0.817 respectively as shown in Table II.

TABLE II: Principal Component Analysis for Direct Factors

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.552	28.360	28.360	2.552	28.360	28.360	1.893	21.033	21.033
2	1.667	18.526	46.886	1.667	18.526	46.886	1.811	20.122	41.155
3	1.290	14.333	61.219	1.290	14.333	61.219	1.806	20.064	61.219
4	1.136	12.625	73.844						
5	.945	10.497	84.341						
6	.552	6.133	90.474						
7	.428	4.753	95.228						
8	.261	2.898	98.126						
9	.169	1.874	100.000						

E. Average Cycle Time

TABLE III: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.324	0.105	0.031	0.58777

Predictors: (Constant), Customer orientation, process improvement, employee involvement

TABLE IV: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.463	3	.488	1.411	.255
	Residual	12.437	36	.345		
	Total	13.900	39			

TABLE V: COEFFICIENTS

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	0.752	0.404		1.860	0.071
	Process improvement	0.253	0.145	0.283	1.741	0.090
	Employee involvement	0.038	0.134	0.047	0.287	0.776
	Customer orientation	0.081	0.138	0.094	0.583	0.564

Dependent Variable: Average cycle time decreased

In this model, the value of R Square in Table III indicates that 10.5% variation in company's average cycle time decreased is due to process improvement, employee employment, and customer orientation and the remaining 89.5% is due to some other factors. ANOVA Table IV indicates that the overall regression is insignificant. The value of the coefficients as presented in Table V indicates that only the process improvement shows the significant relationship at 10% significance level, its coefficient value indicates that there is a positive relationship b/w process improvement and company's average cycle time decreased. From its value, it can be determined that 1 unit increase in process improvement would result in 0.253 unit increase in company's average cycle time decreased, while employee's involvement and customer orientation show an insignificant relationship.

F. Market Share Increase

In this model, the value of R Square in Table VI indicates that 12.4% variation in company's market share increased is due to process improvement, employee employment, and customer orientation and the remaining 87.6% is due to some other factors. Table VII indicates that the overall regression is insignificant. The value of coefficients, as given in Table VIII indicates that only the customer orientation shows the significant relationship at 10% significance level, its coefficient. From its value, it can be determined that 1 unit increase in process improvement would result in 0.367 unit increase in company's Market share increased, While employee's involvement and process improvement show an insignificant relationship.

TABLE VI: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.352	0.124	0.051	0.82506

TABLE VII: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.469	3	1.156	1.699	0.185
	Residual	24.506	36	0.681		
	Total	27.975	39			

TABLE VIII: COEFFICIENTS

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	0.470	0.568		0.827	0.413
	Process improvement	0.113	0.204	0.089	0.553	0.583
	Employee involvement	0.089	0.188	0.077	0.475	0.638
	Customer orientation	0.367	0.194	0.302	1.893	0.066

Dependent Variable: Market share increased

G. Quality Improved

TABLE IX: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.479a	0.229	0.165	0.30605

Predictors: (Constant), Customer orientation, process improvement, employee involvement

TABLE X: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.003	3	0.334	3.570	0.023
	Residual	3.372	36	0.094		
	Total	4.375	39			

TABLE XI: COEFFICIENTS

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.835	.211		3.966	0.000
	Process improvement	0.247	0.076	0.493	3.269	0.002
	Employee involvement	-0.052	0.070	-0.114	-0.749	0.459
	Customer orientation	-0.027	0.072	-0.057	-0.377	0.708

Dependent Variable: Quality Improved

In this model, the value of R square as demonstrated in Table IX indicates that 22.9% variation in company's quality of product improved is due to process improvement, employee employment, and customer orientation and the remaining 77.1% is due to some other factors. ANOVA Table X indicates that the overall regression is significant. The value of coefficients, as given in Table X indicates that only the process improvement shows the significant relationship at 5% significance level, its coefficient value as illustrated in Table XI indicate that there is a positive relationship b/w process improvement and company's quality of product

improved. From its value, it can be determined that 1 unit increase in process improvement would result in 0.002 unit increase in company's quality of product improved, while employee's involvement and customer orientation show an insignificant relationship.

H. Reduction in Cost of Goods Sold

TABLE XII: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.358	0.128	0.056	0.57380

Predictors: (Constant), Customer orientation, process improvement, employee involvement

TABLE XIII: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.747	3	0.582	1.769	0.171
	Residual	11.853	36	0.329		
	Total	13.600	39			

TABLE XIV: COEFFICIENTS

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	0.784	0.395		1.987	0.055
	Process improvement	0.252	0.142	0.285	1.779	0.084
	Employee involvement	0.076	0.130	0.094	0.580	0.566
	Customer orientation	0.099	0.135	0.117	0.735	0.467

Dependent Variable: Reduction in cost of goods sold the last fiscal year

In this model, the value of R square as shown in Table XII indicate that 12.8% variation in company reduction in its CGS is due to process improvement, employee employment, and customer orientation and the remaining 87.2% is due to some other factors. ANOVA Table XIII indicates that the overall regression is insignificant. The value of coefficients as presented in Table XIV indicate that only the process improvement shows the significant relationship at 10% significance level, its coefficient value indicates that there is a positive relationship b/w process improvement and company's reduction of its CGS. From its value, it can be determined that 1 unit increase in process improvement would result in 0.252 unit increase in company's reduction of its CGS, while employee's involvement and customer orientation show an insignificant relationship.

V. SUMMARY AND CONCLUSION

We can conclude that process improvement shows a positive relationship with the company's Average cycle time decreased, company's quality of product improved, and company's reduction of its CGS, and shows significance relationship. It means that by improving process the company can reduce its Average cycle time decreased, improve quality of product and reduce its cost of goods sold. In this research process improvement means (increasing efficiency, making a new innovative product and reducing defect rate), so by increasing efficiency company can get maximum output to fulfill the demand of the customer. Innovative product will help to attract new customer and sustain the existing customers. Reducing the defect rate will help to avoid the wastage of time and resources, so it's better to produce the right thing in the first time. Process improvement shows an insignificance relationship with the market shares increased of the company.

Customer orientation shows positive relationship with the company's market share increased. Here customer orientation means involving the customers into production and increasing productivity, customer's involvement market shares for the company will be increased. Customer orientation show insignificant relationship with the company's average cycle time decreased, company's quality of product improved, and company's reduction of its CGS.

Employee involvement shows positive relationship towards the performance of the organization especially in the quality of the product which ultimately leads towards increased in sales but in this research, the result shows a negative relationship. Here employee involvement means (improving quality performance, reducing risk of the product recalls, and improves employee's commitment towards work), so overall it shows an insignificant relationship.

Four sectors (Textile, sports, surgical and agriculture) were selected to see the impact of continuous improvement on organization performance. The purpose was to check whether the impact is positive or negative and to analyze the most and less influencing factors towards the performance. i.e. quality and cost etc.

This study identified the impact of continuous improvement on organization performance in some of the Pakistani industries. Different factors (independent variable) were identified to see its impact on the organization performance i.e. sales, cost, cycle time, quality, employee motivation and market share. It is concluded that competitive advantage can be gained by organizations that integrate continuous improvement into their product development, manufacturing, and quality processes. By implementing continuous improvement quality of the product can be improved, the defect rate of a product can be reduced, cost of the product can be reduced, sales and market share can be increased. Further, companies can reduce its cost of goods sold and the average cycle time. By training the employees for the existing process does not mean continuous improvement but to make an improvement on the continuous basis by bringing new ideas to the workplace and then shares it organization-wide. The outcomes of the study show that Increasing efficiency, reducing defect rate, and making a new innovative product has the greatest influence towards continuous improvement. Involving customer into the product and increase productivity also shows positive relationship towards improvement. Employee involvement shows the insignificant relationship in this study.

So continuous improvement is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives.

The main findings of this research are:

1. The result shows very little variation sector wise, means that the result is almost similar across the three sectors. Only agriculture sector shows less positive

relationship as compared to other three sectors.

2. The ISO certified companies are performing better as compared to non-certified.
3. More than 80% of the companies use just in time (JIT) technique to manage their inventory and some used JIT with the combination of process reengineering and LEAN.
4. Continuous improvement is mainly focused in the production department as more than 60% respondents mentioned and others include quality control and quality assurance department.
5. In the result, training shows a significant relationship in process improvement only and insignificant relationship in customer orientation and employee involvement.
6. Process improvement shows a positive relationship with the company's Average cycle time decreased, company's quality of product improved, and company's reduction of its cost of goods sold. Process improvement explained 28.360% of variations in the process.
7. Customer orientation shows a positive relationship positive relationship with the company's Market share increased and explained 14.333% variations in the process, but its relation is insignificant with company's Average cycle time decreased, company's quality of product improved, and company's reduction of its cost of goods sold.
8. Employee involvement shows an insignificant relationship with the explained variation of 18.526 %.

VI. Study Limitation

In this section, the threats to validity concerning the empirical study have been discussed. The first threat to the validity of our research is small no of the cities in our survey. We are planning to extend our research to several different types of organization to further validate our result, by including more cities, in order to obtain better results. But due to the scarcity of resources and time, it was not possible for the current study. Due to the limited number of respondent's cities, one should be careful while generalizing the results. The second threat to the validity of our research is that for any specific response, the respondent does not provide the reasons to report results. We are not able to independently control this treat. The third threat to the validity of our research is that we have used questionnaires and one disadvantage of the questionnaire survey method is that respondents are provided with a list of possible factors and asked rank the factors that play a vital role continues important. This tends to pre-empt the factors investigated and to limit them to those reported by the existing studies i.e respondents may only focus on the factors provided in the list. We tried to address this issue by encouraging the respondents to also mention if they could know factors in CI other than those already mentioned on the questionnaire.

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